

# Hobbies

## WEEKLY

A HANGING  
VASE  
HOLDER



FREE  
DESIGN  
INSIDE

CHEMISTRY  
PHOTOGRAPHY  
CARPENTRY  
CROSS WORD  
MODEL AIRCRAFT

June 18th. 1938

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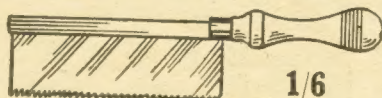
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THE FRETWORKER'S AND  
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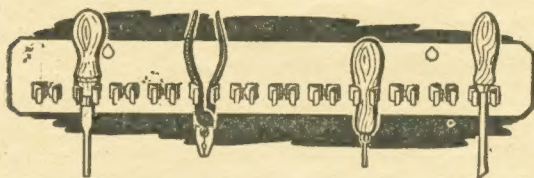
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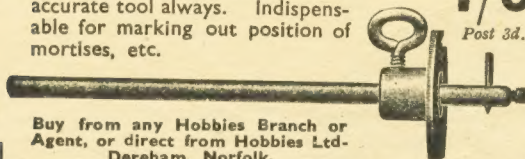
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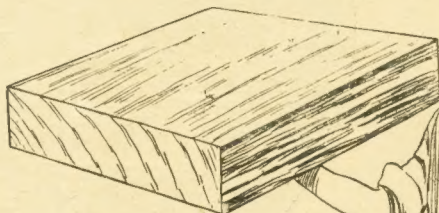
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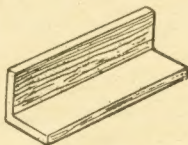
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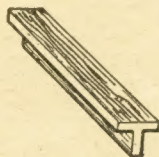


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# Hobbies

## WEEKLY



June 18th. 1938

Vol. 86. No. 2226

## HANGING VASE HOLDER

**T**HIS week's gift design contains patterns for making a very nice hanging vase holder as illustrated here. If cut in the mahogany supplied in the parcel, and fitted with the new mottled ware vase, it will make up a very striking and practical ornament for the hall or porch.

It is intended, as can be seen, to hang, and when complete is 8½ ins. square and 6½ ins. high without the chain. The construction is simple to any fretworker because all patterns are supplied ready for pasting to wood and cutting out.

The design incorporated is of the Japanese or Chinese style, and does not demand a large amount of patience or ability.

### Method in Cutting

Those with fretmachines have the advantage that they can cut two parts together and so reduce the work involved by nearly half. Beyond the top and lower frame which hold the vase, all the other parts are in four's so that a well balanced piece of work results.

This has the advantage, too, of providing variety in cutting if you wish to turn from one piece to another.

On the other hand, if you cut say the four sides one after the other, you get used to the position for placing the drill hole, and also get to know the shortest way to cut out the various frets. This is quite helpful, and increases your time in cutting considerably.

So far as the construction itself is concerned, this is quite straightforward, but as usual parts which are fitted together by a halving joint, require careful testing and

fixing to make a rigid and satisfactory whole.

One of the main points in cutting an article like this is to see that all those pieces which are pairing off with another one, are really correct to each other. Let us get an idea first how the parts fit together as a whole.

### The Joints

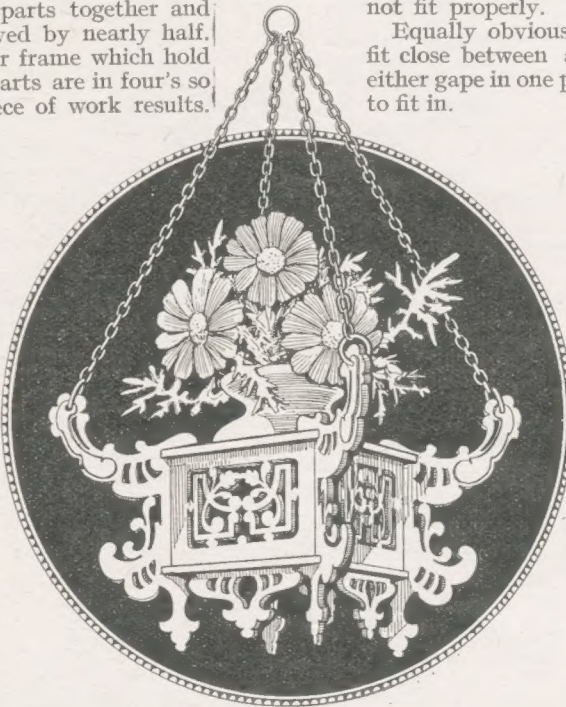
The upper and lower frame halve into joints cut in the projecting corner pieces, the opening A goes into A, C into C, and so on. On the floor or lower piece we have four similar joints where B goes into B, D into D, and so on.

Obviously, therefore, if the distance between the joint on one corner piece, say between A and B, is different from that on the next corner piece, say C and D, obviously the floors themselves will not fit properly.

Equally obviously the side which should fit close between all these four parts will either gape in one point, or else be too narrow to fit in.

Or take another point. The top frame must pass a certain distance inwards at each of the corners to make a perfect square when the top is put in. If you cut one of the corner slots too short or do not allow enough cut-out in one of the corners, the pieces will not be true when put together.

You can, indeed, save yourself a lot of time by testing out these little points first and so overcome the trouble of "fiddling" the parts together which have not been properly cut out. Before you actually cut the joints, measure the





distance with compasses and see that the pieces pair off and fit properly.

First of all, of course, you should cut out the four corner pieces and clean them up. Then cut the top and lower frame and put them together to fit into the corners. Test each one separately and having got a satisfactory joint make some light pencil mark on it—by numbering or lettering—to ensure that the same parts go together again when the whole lot are assembled.

Go round each joint carefully, then put all four corners in place to see you have got a satisfactory whole.

### Stiffening Pieces

The two frames should also be tested with the vase in place, and if you wish that article to settle itself down better, you can easily chamfer the edges of the wood accordingly. Before gluing the parts together, notice and complete the stiffening pieces which are glued each side of each corner arm. These little stiffening pieces are in 1/16in. wood and have their grain running in a different direction from that of the larger piece.

They thus give added strength to the whole thing, and reduce the likelihood of the weight of the holder snapping what would otherwise be a narrow neck of material.

These little stiffening pieces can be cut two together because they are so thin. The operation is easily undertaken by nailing two 1/8in. boards and bend the nail on the underside. Cut the interior circle first, then go round the outline.

### The Sides

Clean up the parts and glue them in position as shown by the dotted line on the pattern. They actually follow the outline of the arm, so you cannot go far wrong in gluing them in place. Notice, however, that the hole at the top comes in line with that in the arm itself.

Now for the sides. These are four straight-forward panels cut from 3/16in. wood, and when they are completed the ends must be chamfered to an angle—as indicated by the section—to allow them to bed between the corners.

By the way, before cutting the long edges of these side pieces, just measure up the distance between the upper and lower frame, and test it out with the distance on the pattern.

This will prevent the side being too narrow and make it bed nicely between the two floors. The ends are chamfered across the grain with a plane, taking it from each end first. Do not push the plane right across the whole length of the

board or you will be sure to break off a piece at the far end.

Another method is to use a long wide medium file, but in doing this you must be careful to keep it flat to the wood and not round the edge off. Do it the whole length of the piece, keeping the wood in a vice and holding the file firmly at each end.

### Mark the Chamfer

It is advisable, too, to run a pencil line across the design to show the extent of the chamfer when completed. The chamfering may take a little time to get it done nicely, but it is worth spending it to get a good fit of the sides in the framework.

When thoroughly cleaned up, you can either add a fancy backing to the fretted portions or leave them open. The linen cloth supplied is for the purpose of backing.

Glue all these four sides in place. If they have been cut correctly they will just bed between the corner pieces and serve to cover the tenon in

### MATERIAL SUPPLIED

*Fretwood.*—For making this Vase Holder, we supply a parcel of mahogany for 2/- (post free 2/6).  
*Fittings.*—New mottled ware vase (No. 6007) sufficient chain and rings for hanging and blue linen cloth for backing, for 2/6 per set (post free 3/-).  
*A complete set of wood and fittings 5/- post paid.*

the lower frame. If, of course, you have not got them exact they will still bed up to the corners although perhaps be a little further in or a little further out between the frames.

The mortise just mentioned is to take the tenon in the four ornamental pendants which hang down from the floor or lower frame. These are simply cut from 3/16in. wood then fitted up into the tenons on the underside.

### Without a Joint

If you are not keen on using this type of joint, you can quite easily cut it out and merely glue the pendant underneath, setting it back 3/16in. from the edge so it is directly in line under the sides. You should decide whether you are admitting

these mortise and tenon joints before you actually start the work because if you are, you need not cut the mortises I.J.K.L. in the lower frame.

The completed vase holder when glued together is now complete with the addition of the four chains provided for the corners. The split rings are hung through the circles cut in the corner arms, then all four gathered at the other end to a single split ring at the top.

## CONTENTS

### GIFT DESIGN—Hanging Vase Holder

<i>Hanging Vase Holder</i> .. .. .	265
<i>Home Chemistry</i> .. .. .	267
<i>Novel Silhouette Stud Box</i> .. .. .	269
<i>Model Railway Inspection Pit</i> .. .. .	270
<i>Tennis Crossword Puzzle</i> .. .. .	271
<i>Magazine Stand in Oak</i> .. .. .	272
<i>Small Scale Model Aircraft</i> .. .. .	273
<i>Picture Your Voice</i> .. .. .	274
<i>Garden Doll's House</i> .. .. .	275
<i>Small Gothic Clock Case</i> .. .. .	278
<i>Storing Photographic Negatives</i> .. .. .	279
<i>Scale Model Plane Patterns</i> .. .. .	283
<i>Hints and Tips</i> .. .. .	284
<i>Editor's Notes</i> .. .. .	285
<i>Clock Front Fret Patterns</i> .. .. .	287

*Correspondence should be addressed to: The Editor, Hobbies Weekly, Dereham, Norfolk, and a stamp enclosed with the Reply Coupon from Cover iii if a reply is required. Particulars of Subscription rates, Publishing, Advertising, etc., are on cover iii.*



# CARBON DIOXIDE and CHLORINE

## HOME CHEMISTRY



**H**ERE are some further interesting experiments with various gases which the home chemist can undertake.

Carbon dioxide is a heavy, colourless, odourless gas which though not actually poisonous, will not support life or combustion. This gas is produced by the act of respiration and when organic substances burn.

For a simple experiment, put a few small pieces of marble into a conical flask and fit the flask with a thistle funnel and delivery tube as shown in Fig. 1. Pour some dilute hydrochloric acid down the funnel so that its lower end is covered. Carbon dioxide will be produced. The gas may be collected by means of a pneumatic trough as described in a previous article.

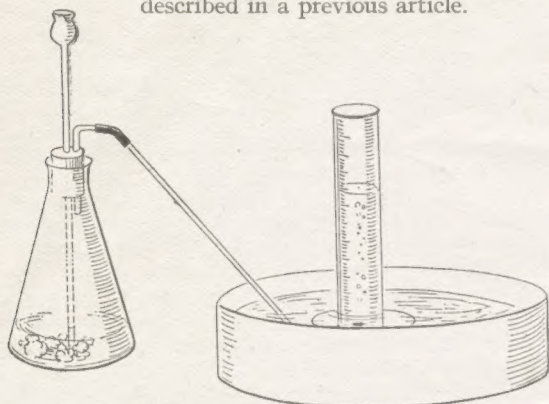


Fig. 1—Apparatus for carbon dioxide experiment

For the next experiment, into a jar of carbon dioxide pour a little lime water. Cover the jar and shake. The liquid will become milky owing to formation of calcium carbonate or chalk. This reaction is used as a test for carbon dioxide.

### Non Combustible

Here is another simple experiment. Pour some water into a jar of the gas and shake well. By this means you will have prepared a dilute solution of carbonic acid. Taste a little of the liquid.

You will notice the flavour of weak soda water, which is produced by forcing the gas into water at a high pressure. To the remainder of the solution add a few drops of blue litmus solution. The indicator will turn red, showing that the gas is acidic.

Now let us go a little further and undertake another. Plunge a lighted taper into a jar of carbon dioxide. The taper will immediately be extinguished, thus indicating that the gas will not support combustion.

Repeat the above experiment with a piece of

burning magnesium. The metal will continue to burn, forming a white powder and a black substance. The white powder is a compound of magnesium and oxygen. It is known as magnesia or magnesium oxide. The black substance is carbon.

We have now proved that carbon dioxide is a compound of carbon and oxygen and can follow up with another experiment.

### More Interesting Experiments

Blow through a length of glass tubing into a test tube containing lime water. The liquid will soon become turbid, showing that carbon dioxide is formed in the lungs.

For yet another experiment, fit the flask in Fig. 1 with a right-angled delivery tube and pass the gas into a solution of lime water as shown in Fig. 2. The liquid will at first become milky as was to be expected.

After a time, however, the liquid will become clear again. This is caused by the action of the gas forming another compound, known as calcium bicarbonate.

If the solution is boiled, the bicarbonate will be decomposed into insoluble calcium carbonate and carbon dioxide, which causes the liquid to become turbid again.

Two more experiments can be carried out as



Fig. 2—A carbon dioxide experiment

Fig. 4—Preparation of liquid chlorine

follows. Pass carbon dioxide for some time into a large bowl. The gas will remain in the bowl because of its heaviness or high density. Now blow a few soap bubbles and allow them to fall into the bowl.

The bubbles will bounce up and down and finally come to rest with no visible means of support near the top of the bowl.

To obtain carbon dioxide from yeast make a solution of sugar and add to it a paste composed of



a little yeast and some water. Pour the liquid into an apparatus similar to that shown in Fig. 2, omitting the thistle funnel. Let the delivery tube lead into lime water as before and allow the whole apparatus to stand in a warm place for a day or two.

You will notice that the lime water becomes turbid, showing that carbon dioxide is given off. Smell the liquid in the flask and notice characteristic colour of alcohol.

When carbon dioxide is cooled under pressure it becomes liquid. If the pressure is suddenly released, flakes of a white solid are formed. This substance is known as carbon dioxide snow and is manufactured commercially. It is used as a refrigerating material.

You can obtain a supply of this material from an ice cream merchant. If it is

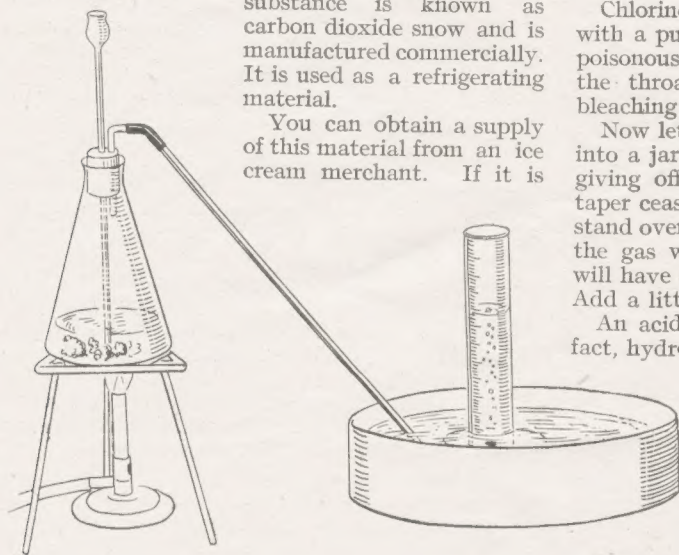


Fig. 3—How to experiment with Chlorine

kept well wrapped up, it will keep for days without evaporating.

Drop a piece of solid carbon dioxide into a vessel of water. The solid will sink to the bottom of the vessel and evaporate rapidly, giving off carbon dioxide gas and forming small fillets of ice.

Press a spoon against a piece of the substance. The metal will immediately set up a piercing screech. This is due to the intermittent evaporation caused by the metal.

Here is an experiment on Chlorine. Heat in a test tube a little concentrated hydrochloric acid and some potassium chlorate. A green gas with a choking odour will be formed. This is chlorine.

#### Stud Box—(Continued from opposite page)

Even up the sides first, then the top, the bow-shaped front coming last of all. Remove as little as possible in fitting. The curve of the drawer front should, if inaccurate, be papered to suit the contour of the box top.

Owing to the end grains showing at the drawer front, it is a good idea to "rub in" with fine glasspaper a coating of candle grease. The enamel will take well to such a prepared surface, and indeed, all edges should be treated in this manner.

Just rub the unmelted tallow on, then glasspaper away, using a fresh piece of glasspaper when

The gas may also be prepared by using manganese dioxide or red lead in place of the potassium chlorate.

Another experiment can be carried out also in the following manner. Fit up the apparatus shown in Fig. 3 and place a little manganese dioxide in the flask. Pour in sufficient concentrated hydrochloric acid to cover the bottom of the thistle funnel.

Heat the flask gently and collect the gas over water by means of a pneumatic trough. Although chlorine is soluble in water, it will not dissolve enough to cause any serious loss of the gas.

Chlorine is a very heavy greenish yellow gas with a pungent, irritating odour. It is extremely poisonous, attacking the mucous membranes of the throat and lungs. Chlorine is a powerful bleaching agent in the presence of moisture.

Now let us try another. Plunge a lighted taper into a jar of the gas. The taper will burn feebly, giving off dense volumes of smoke. When the taper ceases to burn, cover the jar and allow it to stand overnight. The characteristic green colour of the gas will have disappeared, while the smoke will have settled out as a black deposit of carbon. Add a little water and shake.

An acid liquid will be produced and this is, in fact, hydrochloric acid formed by the combination of the hydrogen in the taper with chlorine.

Dip a flower into water and place it in a jar of chlorine. In a short time the colour of the flower will have completely disappeared. Try to bleach pieces of coloured cloth in the same way.

Here is an interesting experiment to obtain Chlorine from bleaching powder. Use the apparatus shown in Fig. 1. Charge the flask with a small quantity of bleaching powder and add hydrochloric acid. Chlorine will be given off and may be collected over water in the usual way.

#### Liquid Chlorine

For Liquid Chlorine prepare chlorine as described above and pass the gas through a U tube cooled in carbon dioxide snow as illustrated in Fig. 4a. The gas will change to a green liquid. If the walls of the tube are strong enough, the liquid may be preserved by sealing off the projecting ends of the tube. You will then obtain a specimen tube similar to that shown in Fig. 4b.

a piece is "clogged" too much with grease.

Before attaching the silhouette permanently in place, enamel it white or jade green. While the second application is drying, give the rest of the work two thin coats of jade green (for a white silhouette) or chocolate (for a green figure).

The inside of the drawer could be lined with a fancy paper or painted bright red. A piece of baize should be adhered to the underside of the base. In fixing the statuette in place, of course, the tenons and mortises must be cleaned with a penknife and a little glue used.



# A SILHOUETTE STUD BOX

**A** CHARMING piece of work, do you agree? Every time you want a collar stud or tie-pin, you will have to refer to the box—that is providing you replace these elusive things in the drawer after use, of course. Dad will most assuredly want one, as well as you and all your friends.

The drawer is of unusual design and very easily made. Bright enamel colours make an ideal finish. So simple and attractive is this modern novelty that you should have no doubts about manufacturing a supply for "doing a little business" with your friends and other people.

The article can be made (roughly) for sixpence and would sell quickly at a shilling—or, perhaps, slightly more if really well made and finished.

## Drawer Construction

With exception of the drawer bottom—which is cut from  $\frac{1}{8}$  in. birch plywood—all the other parts are cut from  $\frac{1}{4}$  in. material. The drawer can be made first so as to be dry by the time you have cut and assembled the carcass work.

Cut to shape the bottom (see Fig. 2) and one flanging piece as indicated by the dotted lines. You will need four of the flange pieces, as these when glued together, constitute the drawer front, back and sides.

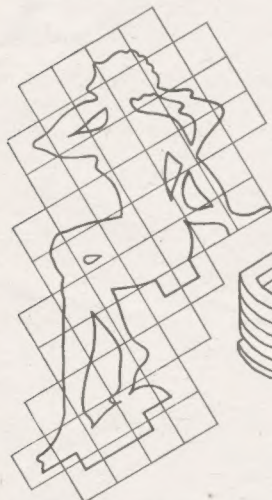


Fig. 1—Outline of statuette in  $\frac{1}{2}$  in. squares

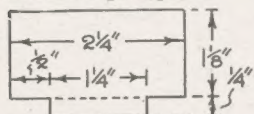


Fig. 3—Box side

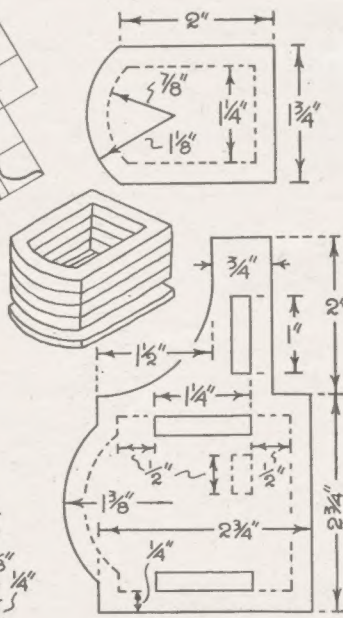
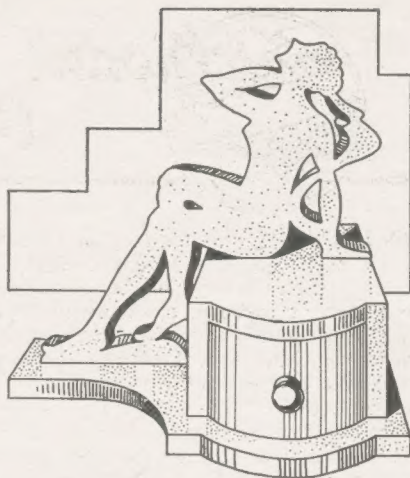


Fig. 2—Base shape and drawer construction



The  $\frac{1}{8}$  in. thick bottom shape has merely to be glued evenly beneath as shown. Be sure the layers are adhered evenly together before setting aside to dry; test with a small set-square.

The top of the drawer box is indicated by dotted lines on the base at Fig. 2. When marking out the top piece, include the  $\frac{1}{2}$  in. long mortise indicated, this being for the tenon below the statuette. You will require two box sides cut the size and shape in Fig. 3. The back end of the box (not shown) measures  $1\frac{1}{2}$  ins. by  $1\frac{1}{2}$  ins. by  $\frac{1}{4}$  in.

## The Base

The top and its mortise is ignored when marking out the base shape to the dimensions given. If you are constructing many of these novelties, it would—as has been advocated before—be wise to draw out the various parts separately on paper and transcribe accurately on the wood the "plain" parts by the pin-prick method, the silhouette copies being made by tracing over black carbon paper.

## Back and Sides

Having cut out the base, select the box back and sides and glue and panel pin the former flush between the other at the rear ends. The lot is then glued to the mortises of the base and the top added. You could assemble the drawer box parts all together first, then glasspaper all over prior to gluing to the base. You will get at it much better this way. Do not rub too much, however.

## Fitting the Drawer

The drawer can now be glasspapered carefully to fit neatly and freely in its aperture. Use a coarse grade of paper held in a block when doing so.

(Continued on previous page)

## MATERIALS REQUIRED

- 1 piece birch plywood (figure), 5 ins. by 5 ins. by  $\frac{1}{8}$  in.
- 1 piece ditto (base), 5 ins. by 3 ins. by  $\frac{1}{4}$  in.
- 1 piece ditto (top), 2 ins. by 2 ins. by  $\frac{1}{4}$  in.
- 1 piece ditto (sides), 2 ins. by 3 ins. by  $\frac{1}{4}$  in.
- 1 piece ditto (d. btm.), 2 ins. by 1 ins. by  $\frac{1}{4}$  in.
- 1 piece ditto (flanges), 6 ins. by 4 ins. by  $\frac{1}{4}$  in.
- 1 piece green baize, 5 ins. by 3 ins.
- 1 drawer knob (No. 49),  $\frac{1}{2}$  in. diam.





# Model Railway Accessories

## LOCOMOTIVE INSPECTION PIT MODEL

IN Hobbies Weekly for August 21st of last year, we described how model dock-side lines (i.e., track with the road coming up to the rail heads as at level crossings), could be made in a simple and most satisfactory way, from sheets of wood. Now we show you how this principle can be employed to construct a very effective locomotive inspection pit.

These inspection pits are not often found on model railways, but nevertheless they make very realistic additions to miniature engine roads and quite repay the small effort necessary in their making.

### The Actual Pit

Inspection pits are, as will generally be known, cavities between the rails to enable fitters, etc., to get right under locomotives for carrying out repairs, and also for inspection purposes, as the name indicates.

There is rather more in a full-sized pit however, than merely being a hole between the rails, for down the entire length of the excavation cross

The first thing to do is to obtain a piece of not too hard wood, 1ft. long by 8ins. wide and  $\frac{3}{4}$ in. thick, and upon it mark from end to end two lines  $3\frac{3}{4}$ ins. from each side (A. and B.) These now should be  $1\frac{1}{4}$ in. apart and are the inner edge of the rails.

### The Line Sides

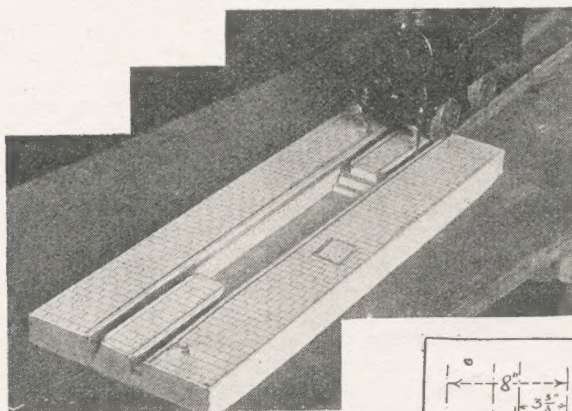
Next scribe two more lines,  $\frac{3}{16}$ in. on the inside of the two lines already drawn. These will be  $\frac{1}{2}$ in. apart and are the inner edge of the flangeways. Finally 3ins. from either end draw the lines C and D.

Next with a sharp chisel remove the section (a b c d) (right through) seeing that the edges of the rectangle so left, are perfectly perpendicular. It is best to remove some of the wood roughly first of all then finish the sides with great care.

### The Channels

Taking a sharp penknife and steel edge, now remove the small sections of wood as shown by the shaded strips to a depth of  $\frac{1}{4}$ in., just as you did for the dock-side lines. Make these channels as smooth as possible, then get a final surface by wrapping a piece of glass-paper round a ruler and placing in the channels rub vigorously backward and forward. Carefully round off the ends of the channels as shown (E).

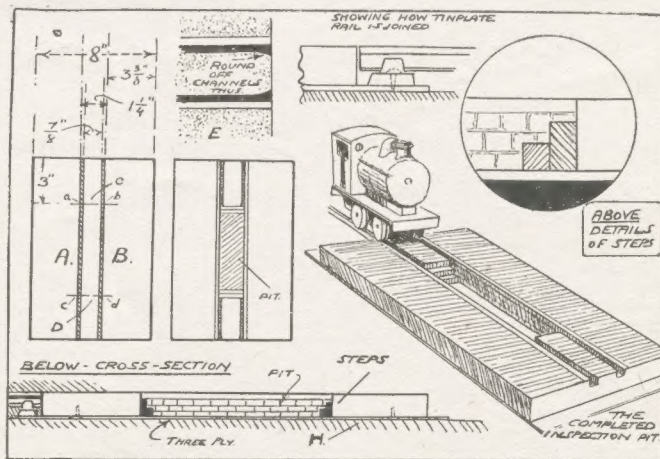
Take a length of three-ply wood 1ft.  $2\frac{1}{2}$ in. by 8ins., and secure to the underside with short screws as (H). This is to allow the joining of tinplate rails to the pit section and also gives a bottom to the pit.



A photograph of the completed pit with (right) details of construction

sleepers are impossible, and the rails have to be specially anchored. Also as much of the strength of the track has been removed, the sides of pits have to be built particularly strong to bear the concentrated weight of locomotives. Men usually enter by steps at either ends.

From a model engineer's point of view however, these considerations do not enter into the construction at all, thus simplifying matters greatly.





Now cut four pieces of wood—two  $\frac{1}{4}$  in. by  $\frac{1}{2}$  in. by  $1\frac{1}{4}$  in. and the other two  $\frac{1}{4}$  in. by  $\frac{1}{2}$  in. by  $1\frac{1}{2}$  in. These are the steps and are glued to either end of the pit as indicated, the large pieces being glued on first. Some care should be taken to make these steps fit neatly.

#### Finishing the Pit

With regard to painting. An elaborate finish is not absolutely necessary, a quite good effect being given by first marking out the rail-heads in pencil. Then paint the rest of the surface green-grey to represent concrete. Or paint the surface with thin glue and sprinkle with any finely ground stone is good.

Brick paper (showing a small brick) is glued along the sides of the pit and shaped to fit the steps. The steps themselves are painted green-grey for concrete, as is the bottom of the pit.

Tin plate rails are fitted to the pit section by running a small screw through the sleeper nearest the section down to the three-ply. The merest catching of the screw end in the three-ply is

enough to hold the rail in position.

The height of the tinplate rail must be adjusted by slipping wafers of wood under the sleepers when required till the rail-head is absolutely level with the surface of the wood, otherwise a locomotive will bump as it runs from one to the other.

Adjustments can be made so fine that no perceptible change in running is noticeable.

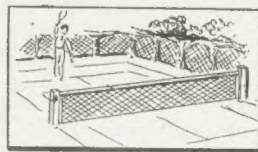
Locomotives on the pit section run, of course, with the flanges in the channels and the wheel tread on the surface of the wood as shown.

#### The Connections

When used with scale steel track (which is really better than tinplate), the joining of the wood and the steel rail is particularly simple. The last sleeper of the scale track is glasspapered to the correct thickness and is easily screwed to the extension or (H).

Then (if not already so), the rails can be brought in to accurate alignment with the flangeways by very slightly adjusting one or both of the chairs on the sleeper.

## Give "Good Service" to this TENNIS CROSSWORD!



**A**NOTHER jolly crossword to solve, and one that is possibly on your pet game—TENNIS. It's a fine outdoor sport, but if you happen to regard it as something rather mild and effeminate, you are certain to find one or two little factors about the game that you did not know before which should interest you. For example, how does one say "nil" in lawn tennis language? Ah, that has you baffled, hasn't it? Yet, you've heard it said often enough while watching the "pro's" perform on the screen or otherwise. And if you are "dolling" strong, you have most assuredly said the word to your girl friend!

It's ten-to-one that you've started on the square already; so remember, no prizes are given for correct solutions. Look out for the completed puzzle next week.

#### CLUES DOWN

1. Remove "i" from "rip."
2. The enclosed lawn reserved for tennis.
3. A girl's Christian name.
4. The great game itself.
5. This place is famous for its lawn tennis ground.
6. A brain-wave.
7. Repellent to taste.
8. A person chosen to enforce the rules and settle disputes in a game.
11. Must be well mown and rolled.
16. Spectators like a front one.
17. Lawn Tennis (abbr.)
19. This ginger stuff is refreshing.
20. Royal Institution (abbr.)
23. A kind of bolted frame for tennis rackets.
24. No points scored.
25. An exclamation of fatigue.
26. Tennis is an outdoor one.
28. You must train to be this.
29. Remove "a" from "tan."
30. Before and after "chums."
31. A bouncer.
33. English Translation (abbr.)

#### CLUES ACROSS

1. A tennis ball is usually struck with it.
5. To succeed in a tournament.
8. Opposite to "down."
9. Abbreviate "on account."
10. A girl's Christian name.
11. This sort of stringing is used in making tennis rackets.
12. The aim of most amateurs is to make big ones for themselves.
13. Surname of a well-known professional player.
14. To hit the ball with the racket.
15. Atomic (abbr.)
16. Failure is often a bitter one to swallow.
18. "Rasp" curtailed.
19. Young autograph collectors are apt to do this to champion players.
21. It doesn't take one to be this on the courts.
22. Players have often reason to do this promptly.
25. A long time past.
27. Tennis lawns should not be this.
30. Skill rules this out more.
32. Another "pro," whose name describes trailing plants.

34. AnnoSalutis (abbr.)

35. It stretches across the court.

36. It's funny the way these move with the ball.

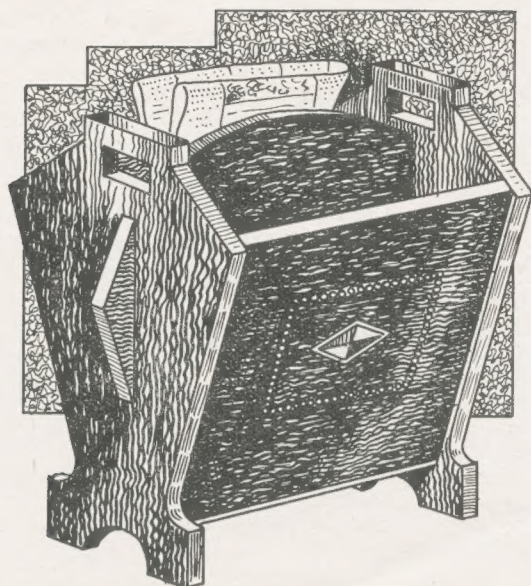


**Solution Next Week.**

**Another "hobby" Crossword shortly**



# A MAGAZINE STAND IN OAK



**W**ORKERS desiring something simple and useful to make might well attempt the work illustrated herewith. Such stands are exceedingly popular and easily sold. This one is, of course, for newspapers as well as magazines.

It may be constructed from plain oak or Spanish chestnut which, as you know, resembles oak and is cheaper and easier to work with. The construction of the article entails very little bother and would make an excellent experimental piece—a further step, as it were, towards your ambition.

## The Stand Ends

Commence work by marking out on  $\frac{1}{2}$  in. stuff the stand ends as detailed at Fig. 1. It is advisable to work from a true squared and straightened edge, including a dead central line. The set-square, compasses and ruler should be used to obtain accurate oblique angles and shapes.

Straight edges can be cut with the panel saw, with curves cut with a pad saw or keyhole saw. The finger grip apertures and partition mortises are best done with a brace, bit and suitable wood chisel. If two  $\frac{1}{2}$  in. holes were bored through at the top and bottom of the mortise, the keyhole saw would remove the waste conveniently, this also applying to the grips.

Having the ends cut to shape, clean the edges with rasp and spokeshave, then smooth with coarse and fine glasspaper. It is assumed, of course,

that the boards have been smoothed over prior to glasspapering.

## Sides and Partition

The size and shape of the central partition is given at Fig. 2. This is cut from  $\frac{1}{2}$  in. material, including the plain rectangular sides which measure 14 ins. long by 12 ins. wide. In making the sweeping arc shape on the partition, note that the radius line, though giving the full measurement, has been broken for convenience. A piece of string and pencil gives the true shape.

## Assembly

When these parts are cut out and glasspapered, glue the partition to its mortises, then glue and nail the sides (with  $1\frac{1}{2}$  in. long flat nails) to the ends to show an  $\frac{1}{8}$  in. break as in the illustration.

Before nailing the sides in place, by the way, the top and bottom edges of same should be bevelled to suit the cant of the ends. A piece of plywood is nailed to the sides as indicated by the dotted lines.

## Decoration

Wooden ornaments and half-round beading could be adhered to the sides as indicated, but these are not absolutely necessary. They do, however, improve the appearance of the stand. Should you prefer to use them, a material list is provided giving necessary particulars, same being supplied by Hobbies Ltd. The stand, incidentally, looks well if stained and polished dark Jacobean oak. All nail heads should be sunk and filled in with coloured plastic wood.

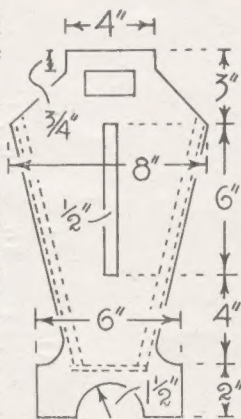


Fig. 1—The end shapes

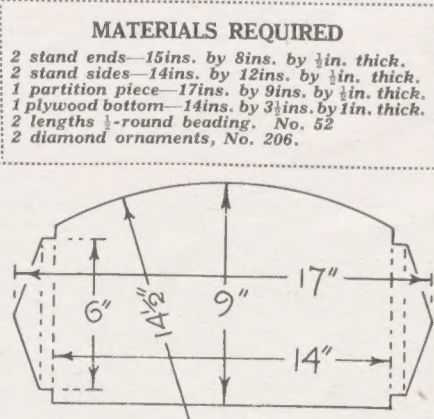


Fig. 2—Dimensions of central partition

## MATERIALS REQUIRED

- 2 stand ends—15 ins. by 8 ins. by  $\frac{1}{2}$  in. thick.
- 2 stand sides—14 ins. by 12 ins. by  $\frac{1}{2}$  in. thick.
- 1 partition piece—17 ins. by 9 ins. by  $\frac{1}{2}$  in. thick.
- 1 plywood bottom—14 ins. by 3 ins. by  $\frac{1}{2}$  in. thick.
- 2 lengths  $\frac{1}{2}$ -round beading. No. 52
- 2 diamond ornaments, No. 206.

**If you want to join The Hobbies League  
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## SMALL SCALE MODELS

# MODEL AIRCRAFT TOPICS

**T**HE highly finished small models which can be seen in shop windows are very nice, but they would not give the satisfaction of a home built model. Modelling aircraft is a straightforward business, the only essentials being patience and sharp tools.

Models of the big machines with their multitude of spars, struts and wires look very businesslike, but they are not simple to build on a small scale. Small scale in this sense is used to denote models of  $\frac{1}{8}$  in. or  $\frac{1}{4}$  in. to 1 foot. If it is intended to make many models it will be found that a collection of models of  $\frac{1}{8}$  in. scale will require a bit of space.

### A 5in. Wing Span

The Hawker Fury fighting plane is perhaps the most suitable to start on. A model of this machine will have a 5in. wing span. The fuselage is cut from a piece of stripwood  $3\frac{1}{2}$  in. by  $\frac{1}{2}$  in. by  $\frac{1}{2}$  in.

The side elevation is marked on both sides, taking care to get them square with one another. The fuselage is then cut out to this shape. The plan is then marked on to the block and the surplus cut away.

The fuselage is then rounded until it is circular at the nose and having the correct shape towards the tail. A groove  $\frac{1}{2}$  in. wide and  $\frac{1}{8}$  in. deep is cut out in the bottom of the fuselage, the front edge of this groove being  $1\frac{1}{8}$  in. from the nose.

The cockpit is then marked on the fuselage and carved out carefully with a sharp chisel or gouge. The interior of the cockpit can be cut out to the shape of a seat or hollowed right out and a small seat fitted according to individual taste.

### Main Planes

The main planes are next cut out from 1 in. by  $\frac{1}{2}$  in. stock, and must be cambered top and bottom. It will be advisable when cambering them to remove a little from the thickness, as the model will look clumsy if they are too heavy.

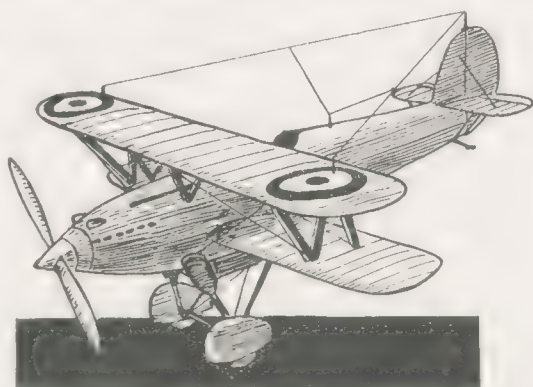
To make the dihedral on the wings, mark carefully where this angle starts and score partly through the wing. Bend the wing to the required angle and rub liquid glue into the score. The shape of the ailerons is marked onto the wings and the outline scored with a knife or bradawl holes

for the interplane struts and centre section struts are bored with a fine bradawl or archimedean drill.

When the main planes are finished the tail planes and rudder can be traced and cut out in a similar manner. These parts may now be put aside and the interplane struts can be made.

They may be made of fine wire bent to shape or they can be made of thin sticks of hardwood. The wire struts are the neatest job however.

The undercarriage can be made of wood or wire

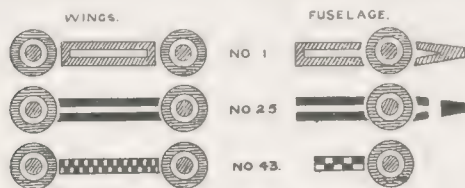


The Hawker Fury Fighter, patterns of which are printed on page 283

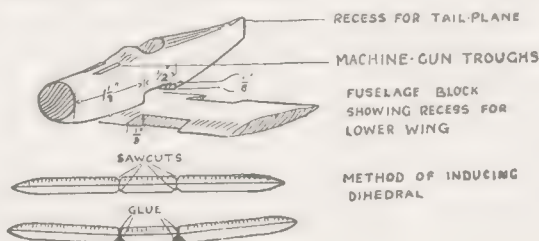
in the same way as the struts. If they are of wire the shock absorbers on the front leg can be cut from a small piece of wood, and the wire threaded through a hole in it. Or they can be made by bending a layer or two of paper round the wire and sticking it to the wire.

The wheel spats are made of two pieces of hardwood trimmed to shape. A groove can be cut in them with a coarse saw and then the groove filled in front and back with plastic wood or plasticine.

The wheels are cut from a piece of thick sheet lead and the tyres are marked with a pair of dividers. The centre portion of the wheel can then be recessed with a knife. This will be found to be quite satisfactory as only a small part of the wheel shows out of the spat.



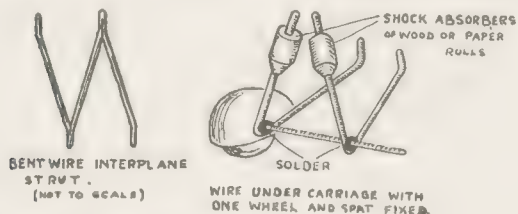
MARKINGS OF FIGHTER SQUADRONS USING "FURIES"





The assembly of the model is carried out in the following order. The lower wing is fitted into the groove and glued in position. The piece below the wing that is cut out may be made good with plastic wood, moulded to shape. The interplane struts are fitted into their holes and adjusted for symmetry.

The top plane is then fitted into place. If everything is correct—stagger, dihedral and symmetry, remove the wing and struts carefully. Put



a touch of glue on each end of the struts and reassemble. When the wings are set in place the undercarriage and the tail surfaces are fixed in place.

When all this is set, the axle is threaded through the undercarriage, a wheel is put in each spat and the whole threaded onto the axle. The spat is glued to the undercarriage.

#### Wheels and Wire

Care must be taken that no glue gets inside the spat to stick the wheel to it. A spot of glue is used to fill up the hole through which the outer end of the axle passes. This will secure the axle and keep it from moving end ways.

The tail bracing wires may be fixed in place with a spot of glue and the tail skid fixed.

The main constructional work is now finished and the painting can be commenced. The Hawker Furies are mainly silver with polished aluminium cowlings and spats. The interplane struts are stainless steel and the propeller is grey.

The model can be given a coat of aluminium paint, which is rubbed down carefully when dry. A second coat is applied which is brushed the opposite way to the first. When this is dry a third coat is applied in the same direction as the first.

#### Markings

The R.A.F. cockades are carried on the surfaces of the wings and on the sides of the fuselage. The number of the machine is painted on the sides of the fuselage and on the lower surface of the bottom wing.

This may be considered sufficient decoration for the model, but for those who care to go further the squadron markings of those squadrons equipped with Furies, are given. These markings are carried between the cockades on the top wing and on the sides of the fuselage.

On the sides of the fuselage the markings converge between the cockade and the leading edge of the tail plane.

#### The Propeller

Finally the propeller is either carved from hardwood or from sheet lead, painted and then fixed to the nose with a fine pin. Bracing wires of fine florists wire may be fixed in place with spots of glue or alternatively they may be of fine thread passed through small holes near the ends of the struts.

These holes can be made in the wings near the struts, the wire is threaded through and secured with a spot of gum. When the gum is dry, the end of the thread is cut off close to the surface. A spot of paint is then put on the place with a pointed brush, when the hole will not show.

The aerial can be of fine wire and the pillars can be made of pins pushed into the wing and tail.

If carefully made this model should give the builder great satisfaction and will certainly make him want to build more elaborate machines.

## A Picture of Your Voice!

THIS may sound ridiculous at first, but nevertheless it is possible to set up a little apparatus and conduct a very interesting experiment which will result in giving you some idea as to what your voice looks like.

First of all you take a round tin—an empty toffee tin will do quite well—then make a circular hole in the side of it. Into this, fit about a foot of rubber tubing, and insert a small glass funnel at the free end of it. Be careful to see that your joints are tight and well made.

#### On Parchment

Over the top of the tin, fix a circular piece of parchment paper, such as is used for covering jam jars, and fit this on in the same way as is done with jam, that is, wet it at first, then allow to dry, when, of course, it will be as tight as a drum. When quite dry, sprinkle some fine dry silver sand on it.

Your apparatus is now complete, and you will use it in the following way. Place the funnel to your lips, just as if you were speaking into the mouthpiece of a telephone, and sound one good full note into it.

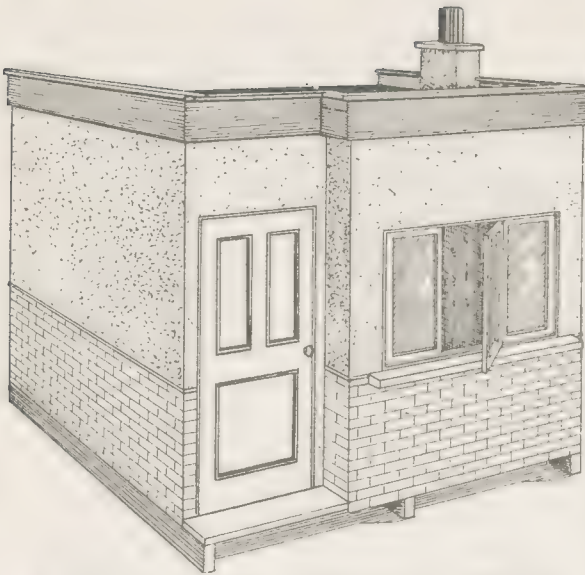
#### The Moving Picture

You will find that the sand on the top of the tin will begin to jump about, and assume a symmetrical pattern. This is the picture of your voice. As you leave off, you will see that the sand is likely to disperse again, and thus spoil the pattern created. To prevent this, sound the note again, withdrawing your lips gradually, so that the sound dies away slowly.

Before anyone else uses it, shake the tin and spread more sand, and you will find a different picture produced each time.



# A GARDEN DOLL'S HOUSE



**H**ERE is an article which would delight the heart of any youngster, a real miniature house, large enough to run in and out of, and to provide hours of amusement. It is no shoddy affair but well constructed, something to be proud of when made.

For the floor use tongued and grooved boards. Cut into as many 6ft. lengths as possible, and work the odd pieces in between the full length ones.

Nail to three joists of 2in. by 4in. stuff and see all is square. Turn the floor over and creosote the underside and joists as a protection against damp.

Figs. 1 and 2 show front and side elevations of the house, drawn to the scale provided. All dimensions can be pricked off on the scale. Fig. 3 shows a perspective view of the framework before it is covered, and will help to make the work of construction clear if carefully studied.

Make the back and front frames first of 1in. by 2in. wood, halved at the joints and nailed and glued together. Take care the frames are quite square. The front frame only 4ft. wide.

## Window Opening

The cross rails and verticals G (1in. sq. stuff the latter), are fixed in to form the window opening, and the short piece above, H, fitted in to take the weight of the roof at this point. Fix these frames to the floor with nails. The side frames are made up to be 1in.

shorter in height than the back and front ones, the left side one being also 6ins. less in length.

These also are nailed to the floor, and the front and back frames nailed to them. At J is a length of 7in. wide board, nailed to the front frame and at true right-angles to it. At K is a length of 2in. sq. timber, nailed to J and also skew nailed to the floor. This piece is the same height as the front frame, so it will extend above J by just 1in.

See it is level with the left side frame. Now join both by two cross rails of 2in. sq. stuff, as seen in Fig. 3, and to make the door opening, the same thickness both sides, nail to the left side frame a 1in. thick piece of wood, reaching from the floor to the lower cross rail.

Fig. 4 shows a section through the door opening across A—B, the jamb shown being a planed slip to be fixed after the door is fitted, for it to butt against, and can be dealt with later.

## The Rafters

The rafters are lengths of 1in. by 4in. wood, planed down at the top edge to 3ins. at the rear to form a gentle slope. Cut to overhang the rear by 1in., and at the rear end saw out a 1in. by 2in. notch, and at the front a 1in. by 1in. notch, to fit over the front and back frames as in Fig. 5, a section across the roof at C—D.

The left side rafter has a piece 6ins. long sawn off the front to make it level with the frame. Fix all with nails where shown, the first and second rafters, counting from the left, being also nailed to the top cross bar between side and K.

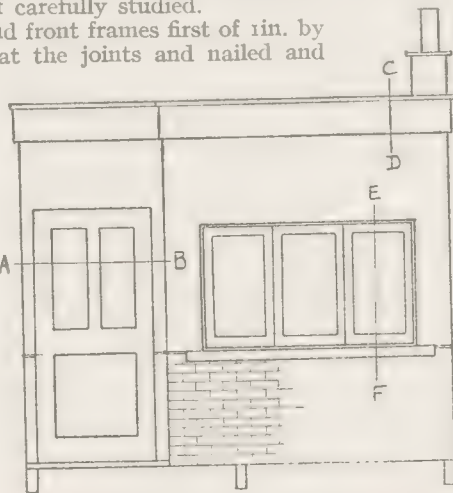


FIG. 1

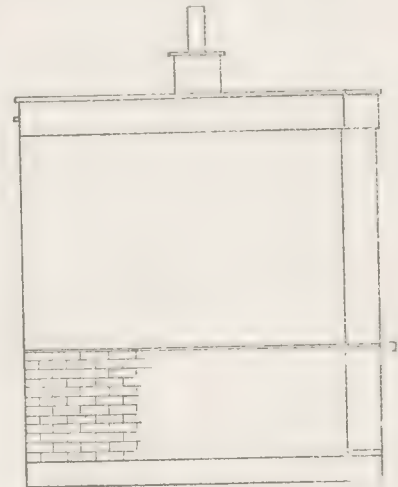
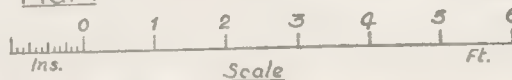


FIG. 2



Front and side elevations with scale for marking out the parts



The chimney stack is a box of wood 12 ins. high, and having one side cut away to fit over the rafter as seen in Fig. 6, to which it is firmly screwed.

The top of the chimney stack is cut large enough to overlap it all round by 1 in., and in the centre is screwed from beneath the chimney pot.

This can be turned or planed up from a 8 in. length of 3 in. sq. wood.

Nail a fillet to the inner face of the chimney stack, level with the top of the rafters, and fix the

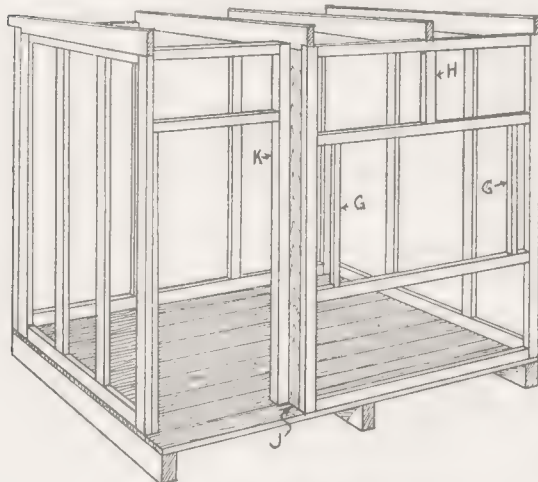


Fig. 3—Constructional details of framework

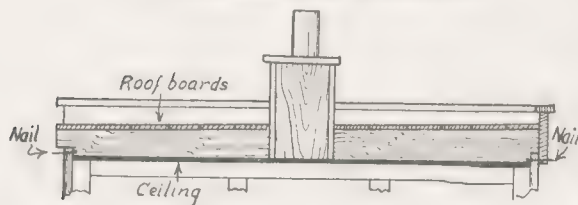


Fig. 5—A sectional view of the roof and chimney

roof boards across cutting them round the stack and nailing the cut ends to the fillet.

The parapet is composed of pieces of 6 in. wide board, nailed round the sides and front, but omitted from the back. Nail to the rafters at the sides of the house, and at the front to the frames and ends of the rafters. On the parapet nail a coping strip of 1 in. by 2 in. stuff all round to finish off.

Before covering the roof boards get some 6 in. wide strips of zinc, bend at right-angles, and nail in the angles where the chimney stack joins the roof, as in Fig. 7. How to fix this at front and side is clearly shown. Leave the back for the moment.

### Roof Covering

For the roof covering use Rubberoid or good quality roofing felt. Lay over and bend up at the parapet, nailing it to the latter just under the coping. Cut out to fit tightly round the stack and there tack, the tacks going through the zinc.

At the rear of the chimney stack nail a strip of zinc as for the side only, the bent over-part will lie

flat on the roofing felt instead of underneath it. A good close joint all round here will stop water creeping between and making its way through the ceiling below. Roof battens of  $\frac{1}{2}$  in. by 1  $\frac{1}{2}$  in. wood are nailed to the sides and down the middle of the covered roof to keep the felt down, and it is, of course, nailed to the back edge of the roof boards.

### Wall Covering

Now cover the walls, outside and in, with asbestos or composite boarding, trimming the cut edges neatly round the window opening.

The boarding butts up against the lower edges of the parapet and covers the flooring at the bottom. It is nailed to the framing, and the meeting edges of the boards should be arranged to come over a vertical so that both edges can be nailed to it and will butt closely together.

At the back the boarding extends between the rafters to cover the space which would otherwise be left between the rear frame and the roof boards, as seen in Fig. 6.

Similar boarding can be nailed to the underside of the rafters for a ceiling.

Pieces of fillet will have to be nailed each side in addition for the ends of the ceiling boards to be fastened to. This will be obvious when the job is being done.

### The Door

The door can be framed up with mortise and tenon joints in the usual way if a realistic job is desired. Beading can be nailed round the panel openings for rebates. Glass could be fitted in the upper panels, and three-ply in the lower.

A more simple way of making the door is to nail

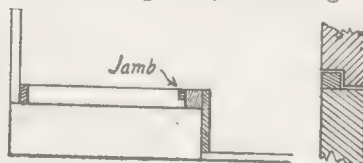


Fig. 4—Section of doorway opening

Fig. 9—Joint of draught preventer

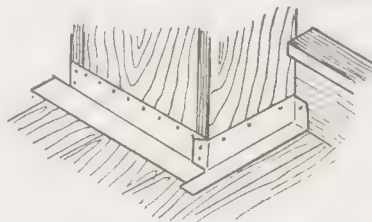


Fig. 7—Chimney stack joins roof

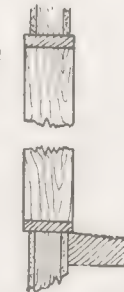


Fig. 8—Section of window and sill

a covering of composite boarding to a framed-up foundation, and imitate the panelling with small moulding, glued and pinned on.

Hinge the door with 2  $\frac{1}{2}$  in. iron butt hinges, and fit a suitable lock and handle. The door jamb, already mentioned, is nailed to K just behind the door and at the top.

Round the window opening, nail a lining strip of  $\frac{1}{2}$  in. by 2 in. wood, as in Fig. 8, which is a section through the opening, down E—F. The sill is a



length of  $1\frac{1}{2}$  in. by  $2\frac{1}{2}$  in. stuff, planed down to a slight bevel on its upper surface to throw off the rain, and screwed below the window frame.

The sash frames, three of which are required, are made up of 1 in. by  $1\frac{1}{2}$  in. stuff, two being fixed and the centre one hinged to open. Nail beading round to form a rebate and fix glass with slips of wood behind.

Of course, the glass can be puttied in, but there is more trouble afterwards when a breakage occurs and replacement becomes necessary. Nail the

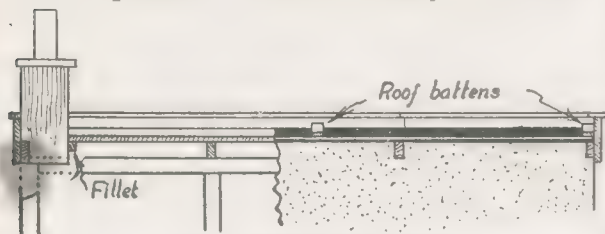


Fig. 6—Back covering boards

fixed frames in the centre of lining slip so as to leave  $\frac{1}{2}$  in. of slip back and front of the sash frames.

The front edge of the hinged frame should be rebated, and a draught excluding strip nailed to the edge of the frame opposite, as in Fig. 9.

#### Interior Decorations

The inside of the house (except the ceiling, which should be painted white) can be painted or distempered in a pleasing shade, or covered with wallpaper, as preferred. A pretty paper with a small pattern would be very suitable. Items like skirting boards, chimney breast and mantelpiece can be fitted at discretion.

Outside a planed strip of wood should be nailed

all round, level with the window, and below this the walls painted brick red. Outline the bricks in white, doing the job with a small brush and straight edged slip of wood. The best brush to use is a proper lining flitch.

The size of the bricks should be in proportion to the house, say,  $1\frac{1}{2}$  ins. by  $4\frac{1}{2}$  ins.

Above the brickwork, the walls are painted cream, and the parapet stone coloured. The chimney pot is, of course, painted brick red.

The door and windows would look best if painted in two colours, the door framing and window surround being, say, medium green and the panels and sash frames light green.

Fit a casement fastener and stay to the window, and add, if a further touch of realism is desired, a very small knocker and letter box to the door.

The cutting list shows approximate quantities of timber required. Items not detailed (except the door), can mostly be made up of waste, as ample for loss in cutting is allowed for.

#### MATERIALS REQUIRED

Joists (3)	.. ..	2ins. by 4ins. deal.	5ft. long.
Flooring ..	.. ..	1in. by 5ins. planed tongued grooved boards.	100ft.
Frames ..	.. ..	1in. by 2ins.	150ft.
Post K and cross rails	.. ..	2ins. by 2ins.	9ft.
Board J ..	.. ..	1in. by 7ins.	4ft. 5ins.
Rafters (4)	.. ..	1in. by 4ins.	5ft. 1in.
Roof boards	.. ..	$\frac{3}{4}$ in. by 7ins.	60ft.
Parapet ..	.. ..	$\frac{3}{4}$ in. by 6ins.	20ft.
Coping ..	.. ..	1in. by 2ins.	20ft.
Asbestos or Composite boards	.. ..	6ft. by 3ft.	12 sheets.
Window lining slips	.. ..	$\frac{1}{2}$ in. by 2ins.	10ft.
Window sill	.. ..	$1\frac{1}{2}$ ins. by $2\frac{1}{2}$ ins.	3ft. 6ins.
Sash frames	.. ..	1in. by $1\frac{1}{2}$ ins.	20ft.
Beading ..	.. ..	$\frac{1}{2}$ in. by $\frac{1}{2}$ in. or $\frac{3}{4}$ in.	50ft.



**Closing Date :**  
**June 30th**

#### RULES AND PRIZES

In the Open Section a 1st Prize of a Guinea Swan Fountain Pen and a 2nd Prize of 10/- . In the Junior Section (those under 16) the 1st Prize is a Fountain Pen value 10/- and the 2nd Prize 7/6. Each print must bear the competitor's full name and address, and his age, if under 16 years. Entries should be addressed: Amateur Photographic Competition,

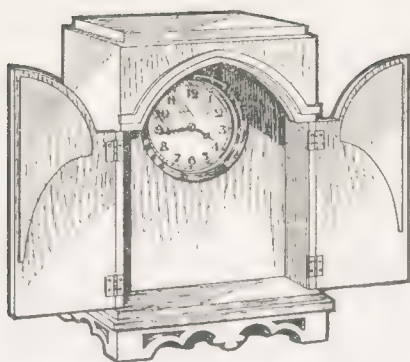
Hobbies Weekly, Dereham, Norfolk, and must arrive not later than June 30th. The Editor reserves the right to publish any entries he wishes in Hobbies Weekly. No competitor to take more than one prize during the season. If a stamped addressed envelope is sent with the entries every endeavour will be made to return them, except the prize-winning ones.

## The June PHOTOGRAPHIC COMPETITION

**Sports—Landscapes—Garden Scenes**

Everyone who has a camera, stands a chance to win a cash prize in our Monthly Competitions. Two sections—Senior and Junior. The available subjects under the above heading are widespread and gives everyone a chance to enter at least one print. There is no entrance fee, but good cash prizes are offered.





Full size patterns of fretted parts on page 287

THE neat little clock case we intend talking about here, and of which we show two views, should appeal to the great majority of our fretworkers. There is something quite unusual about this case, for it is fitted with two doors so that at certain times it may be closed up to form an attractive centre piece for the mantel or side-board. Such a clock as this too, would be highly suitable for a bedroom where, during the day the doors may be kept closed, but at night they may be opened to give full view inside.

The wood to be used should certainly be oak, and the finish to be put upon it, either stain and varnish or stain with a rubbing of wax polish.

The construction of the case is very simple

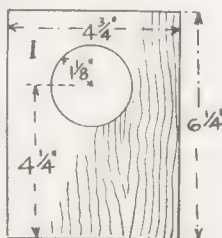
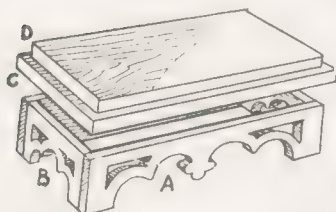


Fig. 1—The base construction Fig. 3—The partition

indeed, and calls for no particular comment beyond that the straight fretcutting needs to be carefully and not too hurriedly done.

The open-work upon the doors, and the overlays also should be very neatly cut and a fine fretsaw used for all this work. It will please the worker to find that all the fretted work required is given full size on page 287 of this issue, thereby reducing the work of redrawing to a minimum.

All that will be necessary therefore to do, will

#### CUTTING LIST

- A—2 pieces 5 1/2 ins. by 1 in. by 1/2 in.
- B—2 pieces 2 1/2 ins. by 1 in. by 1/2 in.
- C—1 piece 6 ins. by 3 1/2 ins. by 1/2 in.
- D—1 piece 5 1/2 ins. by 2 1/2 ins. by 1/2 in.
- E—2 pieces 6 1/2 ins. by 5 1/2 ins. by 1/2 in.
- F—2 pieces 6 1/2 ins. by 1 1/2 ins. by 1/2 in.
- G—1 piece 6 1/2 ins. by 4 1/2 ins. by 1/2 in.
- H—1 piece 4 1/2 ins. by 2 1/2 ins. by 1/2 in.
- I—1 piece 6 1/2 ins. by 4 1/2 ins. by 1/2 in.
- J and K—1 piece 7 ins. by 1 1/2 ins. by 1/2 in. overlays.
- 2 knobs No. 80.
- 2 pairs 1/2 in. hinges.
- Clock—Hobbies No. 5502 or No. 5506.

## A GOTHIC CLOCK CASE

be to stick down the patterns given on page 287, direct to the pieces of wood and cut out in the usual way.

The base of the clock-case is shown in Fig. 1, and the manner of placing the fretted sections is clearly indicated with also the two upper pieces, these latter must be carefully glued up to get equal margins all round.

Piece C will be glued and pinned on to pieces A and B, while the piece D will form the floor of the case and will thus be fixed to this and afterwards glued and screwed through to piece C.

The case is shown partly made up in Fig. 2, with the doors not yet fixed, and the middle partition I cut away in section to clearly show the back of the case.

#### The Casing

The proper sizes of all the pieces to form the case are given in the complete cutting list at the end of this article, so that it should be very simple for the worker to set out each piece, cut it, and then assemble them according to the diagram. Piece G it will be observed, fits down inside the back and sides and the front E, while piece H is simply glued on centrally on piece G.

The partition I is given in Fig. 3 with all leading dimensions shown. When this piece has been cut, and the circular opening for the clock also cut, it should be laid upon the back E and the position of the circle marked round in pencil.

Thus, when the case is afterwards assembled, the openings come exactly opposite each other assuring a perfect fit when the clock is inserted.

The front of the case is shown full size, as mentioned previously, and in cutting this, note

(Continued at foot of page 280)

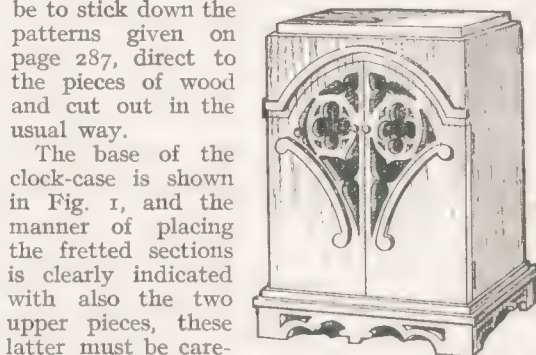
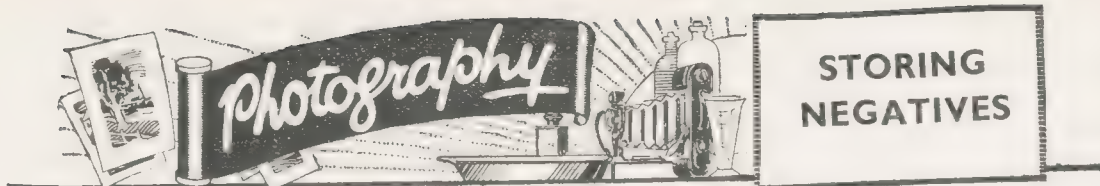


Fig. 2—Details of the casing





**M**OST readers of Hobbies have at some time been keen on that other interesting and instructive hobby, the collecting of foreign stamps and know how very necessary it is to keep them stored away in their proper pages in the stamp album. So it is with amateur photography. If films are allowed to accumulate in pockets, drawers, wallets or any other odd place, they become a regular nuisance and it invariably happens that if you require a certain negative it is almost impossible to find it and the search is abandoned unless you have the good fortune to hit on the spot where it has been hidden.

#### Note the Contents

It may be that many of you so far have not got many films and have perhaps got them stored in the original wallets in which they came back from the chemist who developed and printed them. If you have them in this way we would advise you to mark on those wallets the subjects and date of taking.

We are not, however, so concerned with those who are only photographers for a week or two in the summer, as we are with those of you who are making a definite hobby of photography and are therefore taking every opportunity to use the camera. Although you may not have a fairly large collection of negatives at present, you will soon. So it is the purpose of this article to show you how to store them quickly in such a manner as to be able to find any one of them without a lot of time being wasted.

#### A Useful Drawer Cabinet

By means of a system it is possible for you to store all those which, as previously mentioned, are laying about in odd places and to continue for just as long as you keep your hobby going.

This is a filing system, which was hit on by the writer some few years ago when he managed to pick up an old card index drawer. Those of you who are fond of doing your own carpentry will be able to make one quite easily. The drawer is made from  $\frac{1}{2}$  in. wood with the box cover from  $\frac{3}{8}$  in. The handle is Hobbies No. 238 oak drawer pull ready to fit. Helpful dimensions are shown in the drawings. The actual negatives are placed in envelopes 6 ins. by  $3\frac{1}{2}$  ins. having a flap cut almost square with the body but  $1\frac{1}{2}$  ins. deep.

#### How to Store

This is how the scheme works in actual practice. We will assume that you have been at the hobby for say three years. Collect all the films of 1935, some of which are portraits of your friends, others of snaps taken on the summer holidays, and perhaps there are two or three lots of other events during that year.

#### Marking the Envelopes

Take the first envelope and mark it on the top of the flaps "1935." A little lower, but still on the flap put Number 1. PORTRAITS. If the collection is varied and you want to separate say those of your family from snaps of your other friends, make two envelopes of this group.

Be sure to number them 1, 2 and so on. For the batch of summer holiday snaps it is advisable to split up into smaller groups—as for instance, Beach Scenes; Views when on Rambles, or if you visited several places and have a good number of negatives from each take an envelope for each place visited.

Your series of envelopes will read—"1935. 4. Beach scenes at Eastbourne. 1935. 5. Views on walk to Newhaven," and so complete that collection.

## Our Photographic Feature . . . . .

(Continued)

WHEN ALL THE NUMBERS ON A ROLL-FILM ARE FINISHED TURN ON

GUM STRIP.

TILL THE FILM IS COMPLETELY ROLLED ONTO THE WINDING SPOOL, THEN TAKE IT OUT AND SEAL WITH THE TAB OF 17

GUM PAPER FOUND AT END OF THE BACKING THE FILM MAY BE

DEVELOPER

HYP

DEVELOPED AT A DEALERS OR YOU CAN DO THE JOB. 18

DEVELOPER

FOR THIS YOU NEED TWO DISKS (AS 18)

CONTAINING (1) THE DEVELOPER (3" PER PACKET) - (2) THE FIXING SOLUTION. A BOX OF FIXER (HYPO) MAKES UP A LARGE QUANTITY AND ONLY 19

COSTS A FEW PENCE. FOR ILLUMINATION WHILE DEVELOPING

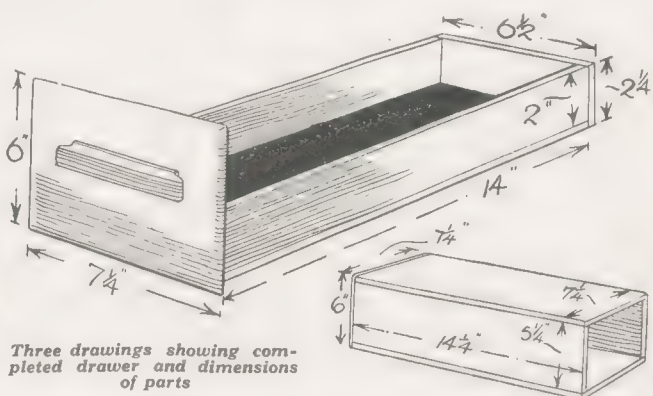
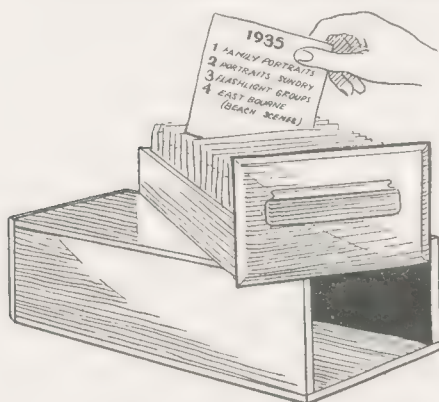
YOU MUST USE A RED LAMP AS THE EMULSION ON THE FILM IS NOT SENSITIVE TO RED. 20



For the lot which were taken in 1936 you file in exactly the same way and likewise for those of 1937. When you have completed this part of the work you will have collated your accumulation in such a way that you will be able to put your finger on any and every one immediately.

### An Annual Index Card

There is one addition which those of you who are filing back negatives must do to make the system 100% efficient. That is an Index card for each year. You only need a thin card for the purpose, and for a drawer of the size given it should be somewhere about 5ins. by  $4\frac{1}{4}$ ins. upright.



Three drawings showing completed drawer and dimensions of parts

This should have, in prominent figures, at the top the date of the year and should be arranged like this—

1935.

1. Family Portraits.
2. Portraits. Sundry.
3. Flashlight Groups.
4. Eastbourne. Beach Scenes.
5. Eastbourne. Walk to Newhaven, etc.
6. Eastbourne. Hastings and Battle Abbey.

These cards are placed in front of each year in the drawer and when you require a certain negative your memory will tell you in which year it was taken. So you turn to the card and take out the envelope containing that negative and in a few seconds you have found the required film.

### Helpful Additions

Those who are taking up photography for the first time this year, will see from this illustration how to proceed with your filing. Do not hesitate to put several negatives into each envelope. A couple of dozen will be quite alright for they will

### Gothic Clock—(Continued from page 278)

must be made that to make the doors to open, the solid lines shown on the pattern must be cut through and the two parts hinged independently as shown in the left-hand sketch of the clock open.

Be sure and do all the interior cutting to the doors before they are cut round, and also cut the base section patterns (sides B) from the sheet before sticking down the larger piece of the pattern.

The overlays above the door, shown as J, will be cut two together from the single pattern shown, also the outlines for overlays marked K

not harm and it will make the system rather more efficient than to put only two or three in each.

Here is another very useful addition to such a system of filing. When you have made some prints from any of your negatives you will find it of great help to make a note of the paper used, the developer, and the time and distance of exposure. Slip this note into the envelope with the negative and you will not have to waste time or paper when you make further prints from it.

Here is the idea.—

Negative of Father in the Garden.

Paper—Barnet Scott Soft Gaslight, Developer M Q.

Exposure—6 seconds, 12 inches, 40 watt.

The same idea will specially appeal to those who enlarge when printing for it will mean not only the saving of time but also money.

### Keeping a Book

If you prefer it, these records of print-making can be retained in an ordinary index book but for this, every negative will have to have a distinctive title and be indexed under that title. This, however, is rather a tax on the memory, for if you have a large number of negatives it is not easy to give them titles which can be remembered. Although we know of some keen amateurs who do it this way, we recommend the slip in the envelope.

Some of you may have a good scheme already in use and we should be quite pleased to know about it, if you think it is better than the one mentioned. It is interesting to know, however, that the drawer which the author has, has been in use for some years now and contains some four or five hundred films dating back to 1925.

upon the doors will need to be traced and transferred to the wood ready for cutting out. In fixing the front of the case to the sides, keep the two doors and the piece E above the doors together and secure them thus so that the doors will eventually fit properly and in true position with the piece E above.

Fix two small knobs No. 80 to the doors in the positions shown. The frets of the doors would look well if they were backed with coloured linen cloth or even thin oak wood.



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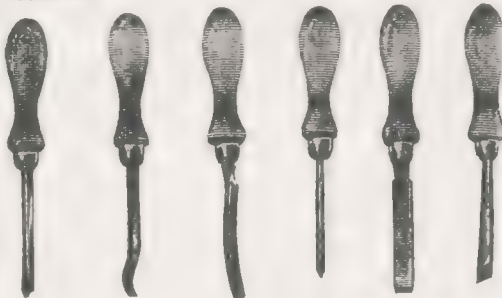


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*J. Bennett*



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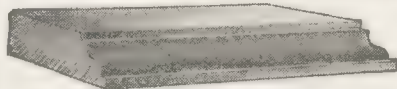


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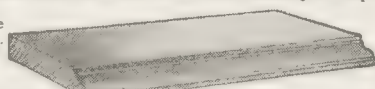


# MOULDING for the woodworker

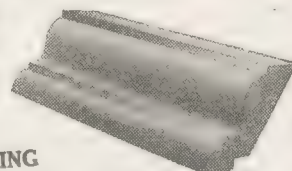
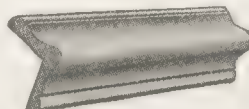
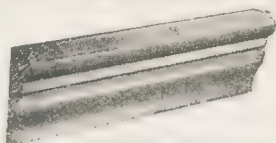
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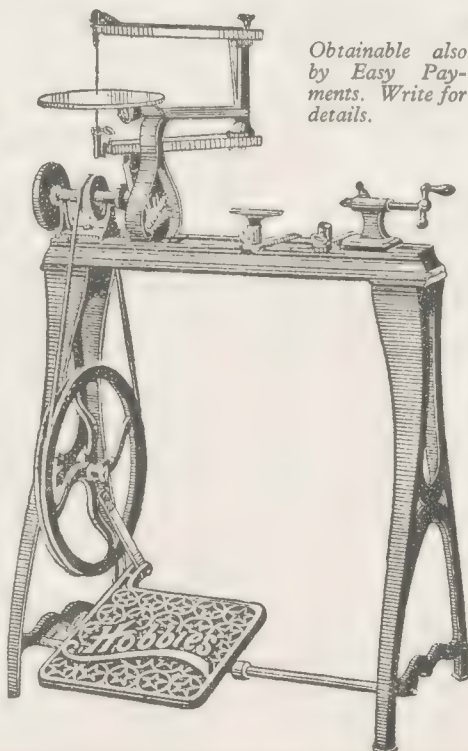
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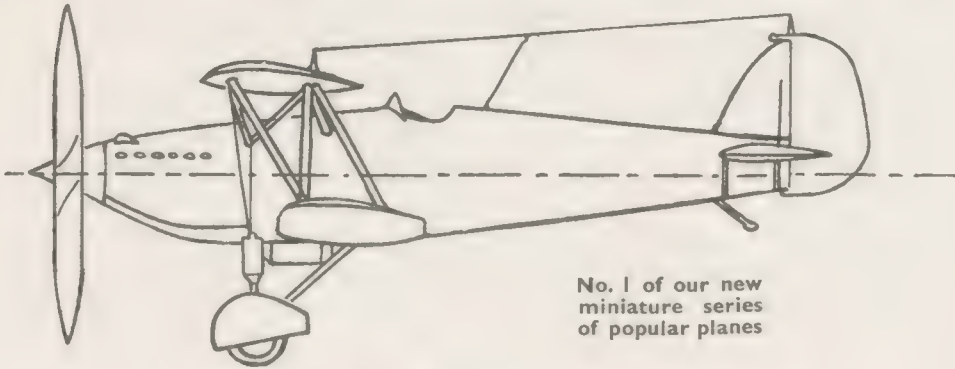
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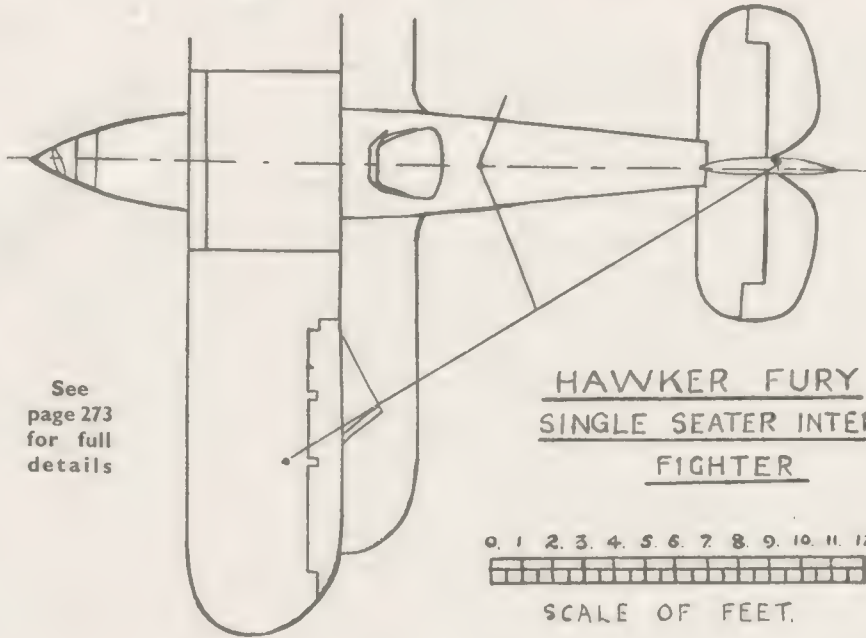
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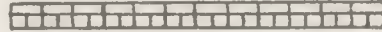
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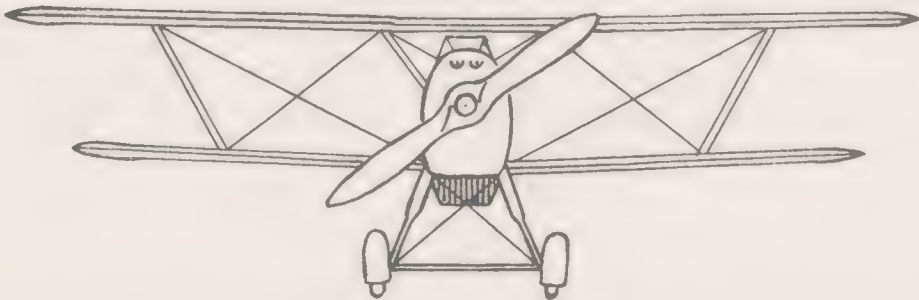
See  
page 273  
for full  
details

HAWKER FURY  
SINGLE SEATER INTERCEPTOR  
FIGHTER

0. 1 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12



SCALE OF FEET.

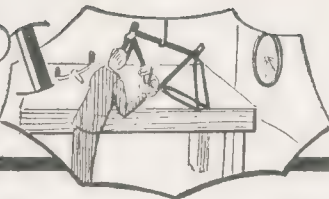






# HINTS & TIPS

## WORTH KNOWING



For original Tips published the sender will receive a Hobbies Handy Propelling Pencil. We cannot acknowledge all those received or guarantee to print them. Send to The Editor, Hobbies Weekly, Dereham, Norfolk. Keep them short and add rough pencil sketches if possible.

### Chemical Triangle

A USEFUL pipe-clay triangle for chemical experiments can be made from one or two clay pipes. Pieces about 1½ ins. long, should be broken off and threaded



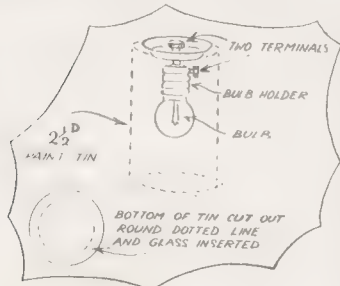
on wire as shown in diagram. Do not have wire which fits the hole in the pipe-clay too tight or the expansion due to heat may snap the tube. Leave the ends of the wires long enough to rest on the tripod, as can be seen. (P. J. Hart, Pimlico).

### A Polishing Glass Tip

A USEFUL and simple hint for polishing glass is to take a sheet of newspaper, roll into a ball and polish the glass.—(W. H. Latham, Morecambe).

### Small Tent Lamp

HERE is a useful tip to make a small tent lamp or a reserve lamp for mending a puncture on a dark road. First get a Hobbies empty enamel paint tin, take off



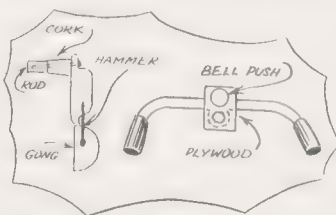
the lid and screw on an electric pocket lamp bulb holder. Then fix on two wires and screw in your bulb. Cut out the bottom of the tin and put in a watch glass. Thus you have your lamp all ready to fix to your battery.—(G. Richardson, Houndsditch).

### Vertical Drilling

WHEN boring a hole with a brace and bit, it is necessary to get it vertical. A good idea is to place a mirror at the side of the wood. The bit will then be reflected, and if it is vertical, both the bit and the reflection will appear to be in one line. If the bit is not vertical, the bit and the reflection will be at an angle.—(H. Thom, Glasgow).

### An Electric Bicycle Bell

I HAVE just fitted this on my cycle, and it is very satisfactory. All that is needed is a cork, a small piece of wooden rod ½ in. long and ¼ in. wide, a long nail, a bell, a battery, bell push and a few yards of wire. First push the nail through the hole in the top of the bell, then through the cork, and finally through the rod, as shown. Leave that, turn to the handlebars and undo the nut in the centre. Then take a small



bell push (I used one about 1 in. across) and a piece of plywood larger than this, and about 1 in. longer. Bore a hole in the end, put the rod from the handlebars through and fix the nut up tightly. Screw down the bell push but before doing so, attach two wires and lead them along the frame to the saddle. The cork on the bell is pressed into the hole in the frame under the saddle. One of these joins on to the bell, and the other goes to the battery. This can be kept either in the saddle bag, if there is one, or if not, in the tool bag. I used a G.B. battery. Finally take a short piece of wire from the other pole of the battery, to the other pole of the bell. Press the bell push on the handlebars, and the bell will then ring.—(E. H. Magee, Bournemouth).

### Shovel Protector

OFTEN when using a spade or shovel, the place where you put your foot gets rather sharp and, in time cuts your boot. To stop this, secure two lengths of



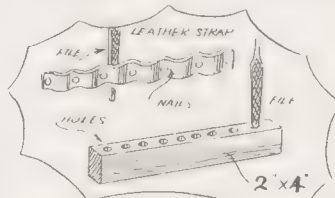
¾ in. piping about 4 ins. long and cut down one side. Then place the piping on the sharp edge. You will find that it will last a long time without breaking.—(D. MacPhail, Mata Mata, N.Z.).

### Fixing Window Panes

THIS tip will be found very useful when putting in window glass. Before putting windows, coat the edge of the glass and the frame with a good grade of outdoor paint and apply the putty while the paint is tacky. It acts as a base to which the putty will adhere more firmly so that it is less likely to crack and come off.—(D. Wilcock, East London, S.A.).

### Simple Tool Rack

A GOOD device for holding files, screwdrivers, etc. is to take a narrow strip of leather and nail it to the wall as shown. The files, etc., are stuck in the



loose loops. Another device is to bore holes in a piece of two-by-four wood as shown, and nail the wood to the wall. The tools are placed in the holes.—(Z. G McFarlane, Gainsborough, Canada).



# The EDITOR'S NOTES



**M**ANY of you may be anxiously waiting for the result of the May Photographic and the Maze Competitions, and I hope to be able to allay your anxiety next week. So many readers imagine that Hobbies is like a newspaper—prepared today for publication tomorrow. Well, no magazine can be rushed through like that, and much more pains and patience are taken over their preparation and distribution. Consequently, I am unable to “put it in next week’s Hobbies” as requested by many readers.

\* \* \*

**T**HE same, naturally, applies to the competition results. The entries have to be sorted and then judged very carefully. All of which takes time—particularly in the case of photographs—so it is naturally some time before the final lists are ready to print. Please do not be impatient, therefore, if any results or correspondence lists do not appear immediately, or any request you send in is not printed for two or three weeks.

\* \* \*

**I** MAGINED I should hear something when I mentioned recently about the number of matches used in a piece of work made by a reader. You may remember he had 25,422 matches, and the distance they would reach was left to George to sort out. But George is always lucky, and here again a number of readers gave me the result long before he had worked it out. But here again there was a variety of opinion because anything between 1 inch and 2 inches was allowed for the length of each match.

\* \* \*

**A** NYHOW, I was hopelessly out in my guess of stretching across England—even at its narrowest part—because the length is very considerably under a mile! And if they are put side by side, as one reader points out, they would only occupy a distance of 88 yards 9½ ins. ! So that’s that.

\* \* \*

**T**HE suggestion has been made from several directions that Wireless Notes would be helpful and interesting. Now would they? It is a very wide subject, of course, and one which could certainly not be dealt with in the highly technical

manner of some papers. Then again, some would want crystal sets, others super valve sets, and some, possibly, television sets. Now the last mentioned is almost beyond the ability of the average amateur, even apart from the heavy cost of the parts. But I *would* like to know what readers think of the suggestion of wireless articles in these pages, and what they would like. Of course, only a very few years ago nearly everyone made their own sets, and were constantly building and re-constructing. But now, it seems to me, most people buy their own ready-made. Anyhow, let me know what you think about it, will you?

\* \* \*

**A** N interesting picture came along recently from Victor Sutton of Billericay, Essex, of a wonderful fire scene in which his models were used. There are 45 engines, dozens of escapes and complete water towers and salvage equipment. The models are splendid replicas and the whole scene is laid out with an imitation burning building, firemen and hose all over the place and a wonderful scene of apparent activity. To prove the interest and value of such work, Mr. Sutton has appeared in four television performances, sold the film rights, booked it for a Christmas bazaar, and sold quite a lot of illustrations. Just shows what originality and work will bring about by enthusiastic readers. Mr. Sutton, by the way, acknowledges much useful aid and practical helpfulness from Hobbies ever since he commenced making models when a boy at school.

\* \* \*

**I** AM afraid one of our friendly readers in the Correspondence Club has a grouse against some others. He resides in Klang, in the Federated Malay States and says some of the correspondents do not reply to his letters—particularly from part

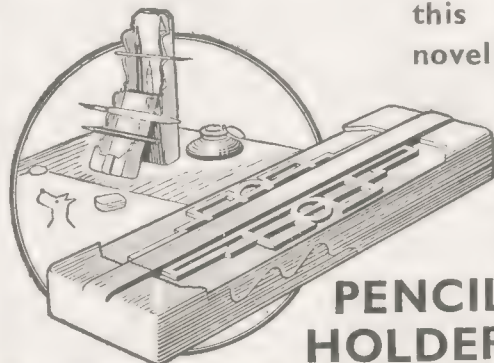
of Africa—nor do they return the stamps he sends. That is really a bit thick, I admit, but our friend should remember that it is little use sending stamps because they cannot be used on correspondence from another country.

\* \* \*

**T**HE novel holder illustrated will appeal to all our younger readers I know, for it is useful and practical. Don’t miss next week’s number.

The Editor

## Next week's patterns for making this novel



**PENCIL HOLDER**



# MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 2d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Order and Stamps must accompany the order. They will be inserted in the earliest issue. To sell anything except fretwork goods or those shown in Hobbies Handbook. Orders can be sent either to Hobbies Weekly, Advertisement Dept. 30/32 Ludgate Hill, London, E.C.4, or Dereham, Norfolk.

**WANTED YOUNG MAN** interested and with sales ability to take charge of sales of Marklin model railways, model boats and aeroplanes, etc.—Vallance & Davison Ltd., 144 Briggate, Leeds.

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**LONELY?** Then write Secy., U.C.C., 16BB, Cambridge St., London, S.W.1. Genuine. Estab'd. 1905.

**FRAME YOUR OWN PICTURES!** We supply mitre block, cramps, mouldings, etc. Easy, fascinating work. Profitable, too!—Hobbies Ltd., Dereham.

**50 STAMPS FREE.** Approvals 2d. stamp.—Paul, 43 Bramley Road, London, W.10.

**IT'S EASY TO ENLARGE DESIGNS,** pictures, etc., up to eight times original size with Hobbies all-steel Pantograph. 4/6; post 6d.—Hobbies Ltd., Dereham.

**BRAND New Cabinet Maker's** 4in. Precision Planing Machines, £4. Motorised, £7. Electric Motors; Paint Spray Plants; Drilling Machines, etc.—John H. Steel, Bingley.

**DO YOU KNOW WOOD?** Eight specimen pieces each about 3ins. square, marked for reference, 8d. post free.—Hobbies Ltd., Dereham.

**6/- IN THE £ COMMISSION.** Xmas Club Agent wanted.—Garratt, Stockley Street, Northampton.

**MAKING A CLOCK?** We supply movements from 3/9. Hobbies Ltd., Dereham.

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**MAKE YOUR OWN UKULELE,** Mandolin, Guitar, etc. from Hobbies designs and materials. You'll be surprised how easy and cheap it is!—Hobbies Ltd., Dereham.



Realistic Traffic Lights. 7½ ins. high, with 3-lamp switch. With battery.

**2/11**

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Petrol Pumps of Esso or Shell. Lights lamp when pumped 6 ins. high. Complete with battery inside.

**2/11**

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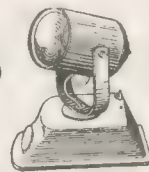
Realistic Light-house on rocks. Lamp which lights Complete with battery inside.

**2/11**

Post 4d.

## Models..

**BOYS.....** Here's a chance to buy some fine electric working models. If you are making a Doll's House why not get the set of bathroom fittings in polished aluminium.



### SEARCH-LIGHT

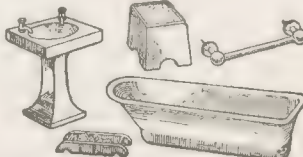
With Powerful lens. Stands 4½ ins. high. Well finished and fitted with battery.

**3/6**



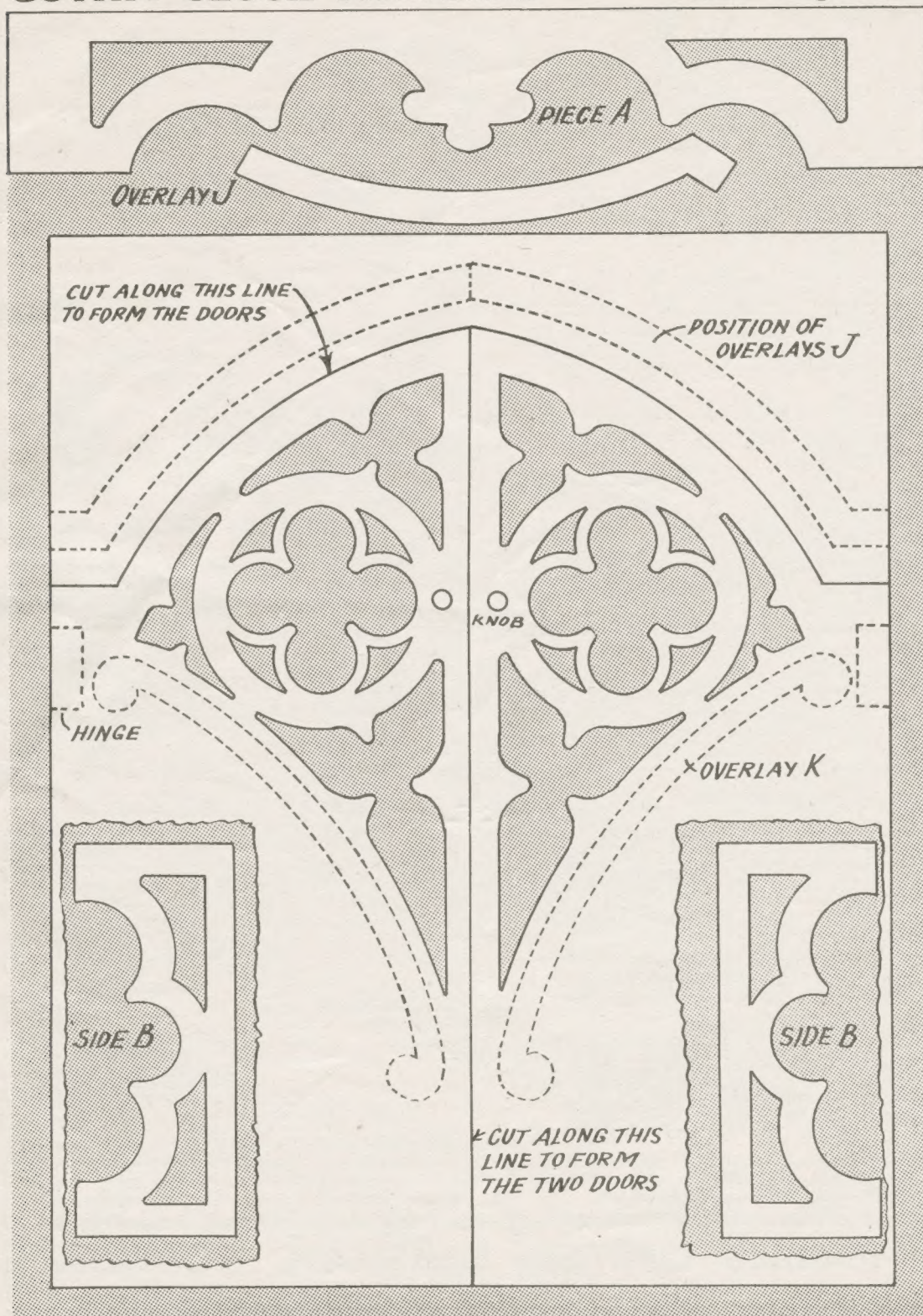
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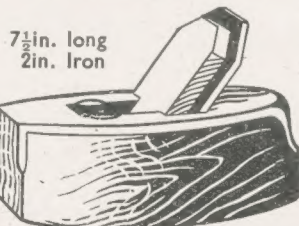
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*It is a pleasure to work with a good plane. Hobbies planes are good planes—yet cost no more than the ordinary kind.*



## THE No. 10 PLANE

One of our most popular planes. It is a handy size and useful on a hundred and one occasions. You will like the "feel" of this plane. The blade is  $1\frac{3}{4}$  ins. wide. Price 3/6, postage 6d.

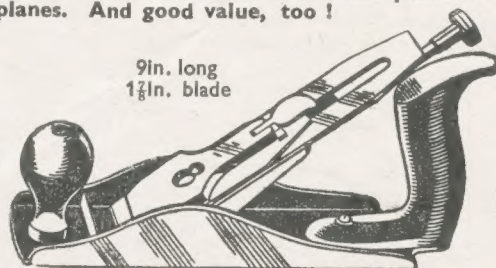


## SMOOTH- ING PLANE

If you go in for carpentry seriously this is a plane you must have. It has a double iron. The block is made from well seasoned beech. Price 5/6, postage 6d.

## THE No. 1 PLANE

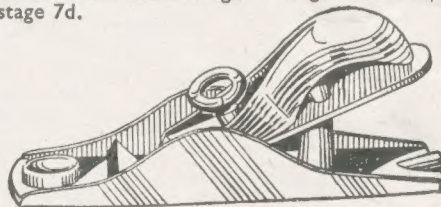
For those small, awkward to get at jobs! This plane is definitely not a toy. The iron is  $\frac{7}{8}$  ins. wide. Price only 1/2, postage 2d.



9in. long  
 $1\frac{1}{2}$ in. blade

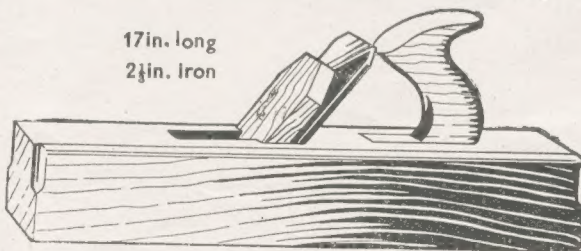
## THE HANDYMAN'S PLANE

If you prefer the metal plane you will like this one. It has a simple blade adjustment device—one knob controls everything. You can use this plane for hour after hour without signs of fatigue. Price 11/6 postage 7d.



## THE No. 6 PLANE

For light carpentry this plane is just the thing. It has a well finished metal body and the blade is  $1\frac{1}{2}$  ins. wide. What a difference from the cheap badly made planes one sometimes sees! Price 2/6, postage 6d



17in. long  
 $2\frac{1}{2}$ in. iron

## JACK PLANE

Just the plane for general carpentry. Block made from well seasoned beech, beautifully finished and a delight to handle. The double iron is fitted in the approved manner. You'll be proud to own such a plane! Price 8/6, postage 9d.

# HOBBIES LIMITED, DEREHAM, NORFOLK

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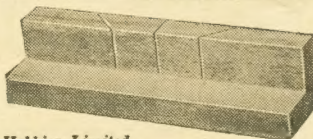
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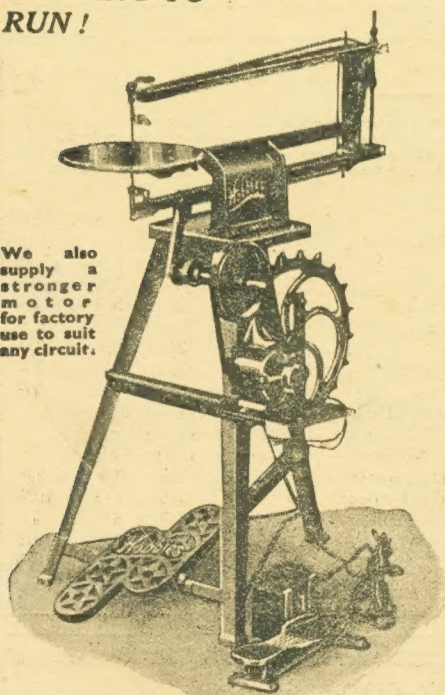


# NEW Device Abolishes Treadling!

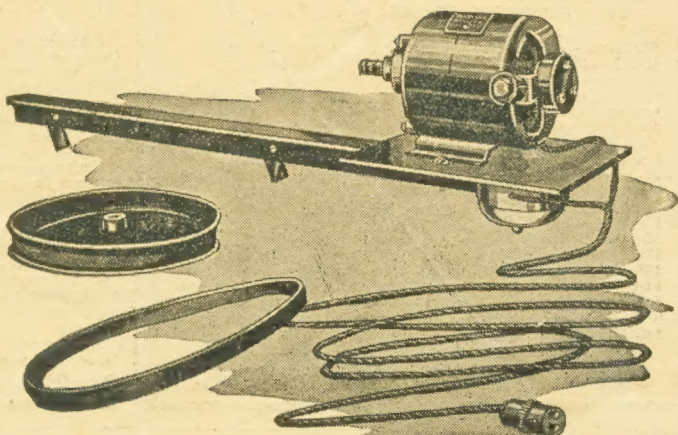
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